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Rethinking Energy Statecraft: United States foreign policy and the changing geopolitics of energy

Morgan Bazilian, Benjamin Sovacool, and Todd Moss

Abstract: The United States Administration has an opportunity to foster a new energy statecraft based on the realities of a dynamic and rapidly-changing global energy marketplace. The geopolitical considerations of this energy transition are not well-explored. Additionally, the recent renaissance of oil and gas in the U.S has reinforced the alluring notion that energy independence and national energy security are the same thing. But the global nature of energy markets expose this notion as utterly misleading. A re-envisioned energy statecraft would utilize a variety of U.S. foreign policy and multilateral tools to reform the international energy sector, protect the global energy marketplace, and spur investments in new generation and innovation. These steps require building an integrated approach to the multiple energy-security challenges.

Policy Implications

- The energy transition is already changing the geopolitical landscape, which demands a modernized approach to energy statecraft.
- U.S. foreign policy should abandon attempting to achieve so-called energy independence.
- Instead, energy statecraft should focus on protecting the global energy trading system and deploy public policy tools to spur investment in new energy systems and technologies.

ENERGY AND SECURITY

Energy may be central to United States' foreign policy, but we are living in the past. The new administration thus has an opportunity to foster a new energy statecraft based on the realities of a dynamic and rapidly-changing global energy marketplace.

The dominant energy security policy of the United States has long been formalized by the Carter Doctrine, which stated that any effort by a hostile power to block the flow of oil from the Persian Gulf would be viewed as an assault on the vital interests of the United States, and would be repelled by “any means necessary, including military force.” Officials continue to interpret energy statecraft largely through this oil lens, sometimes accompanied by the ebb and flow in popularity of so-called energy independence. However, the massive transitions now apparent in the global energy sector, and the technological revolution underway in nearly all aspects of modern energy, demand an evolution in the U.S. foreign policy approach (Pasqual and Elkind, 2010; Bordoff, 2016).

The U.S. Department of State acknowledges that, “energy is at the nexus of national security, economic prosperity, and the environment”, and defines its role as managing “the geopolitics of today’s energy economy through reinvigorated energy diplomacy with major producers and consumers of energy” (Department of State, 2017). The Department added a Bureau of Energy Resources (S/ENR) in 2011, and it has, in the past few years, begun moving beyond a focus solely on issues related to the flow of global or regional commodities. The U.S. government has turned to the intricacies of electricity, including issues related to growing regional interconnection, and more focus on distributed technologies, diverse generation portfolios, and local autonomy. But this doesn’t yet go far enough.

MULTIPLE ENERGY TRANSITIONS

The “energy transition” is an inchoate concept. Classically understood to encompass shifts in the national supply of energy or the discovery of new energy resources, energy transitions are now also conceptualized to include transformations in the markets that deliver energy, in addition to conversions in end-use devices such as air conditioners, light bulbs, or engines, or even the “systems of systems” that delivery energy services (Sovacool 2016; Grubler, 2016). In its recent formulation, it refers to a confluence of issues from rapid cost declines in renewable energy systems like wind and solar, to the U.S. shale “revolution,” to IT advances in smart grids, to innovative new business and contract models (Grubler, 2012; Smil, 2016). As a result of these changes, the way energy is produced, distributed and consumed around the world, however, is undergoing radical change. Global economic strength is shifting from developed to developing countries, not coincidentally mirroring shifts in future energy demand and investment. At the same

time, many countries are struggling to upgrade their energy systems to fully support the interlinked requirements of security, sustainability, and economic growth. Additionally, the convergence of physical infrastructure and digital technologies require decision-makers to adapt beyond static 20th Century approaches.

While the climate change impacts of the transition are being well-monitored and being linked to security,ⁱ less so are the other energy-related considerations. We can outline some of the likely aspects, each complex on their own: 1) institutional shifts in the influence and membership of multilateral organizations like the Organization of Petroleum Exporting Countries (OPEC) and the far smaller International Energy Agency (IEA); 2) the accelerating growth of trade in natural gas either through new international pipelines or via a rapidly expanding market for liquefied natural gas (LNG); 3) intellectual property and R&D issues in the development of cutting-edge clean edge technologies and their trade; 4) issues of cybersecurity that are growing in importance with the rise of interconnected systems and new forms of metering and system operations; 5) the changing landscape for conflict and other minerals due to these changes in technologies; 6) the growing regional interconnection in electricity grids from the silk road to East Africa; and 7) the enormous issue plaguing developing countries: lingering energy poverty and the demand for provision of quality and affordable energy services to billions of people and businesses.

Examples of this changing geopolitical-energy landscape abound. The viability of OPEC to influence oil price is lessening, and the IEA is broadening its traditional rich country (OECD) base (Owyang, 2017; IEA, 2017). The rise in exports from the U.S. in LNG is changing the supply demand contours of the market, while at the same time Russian-led pipelines are shifting decisions about investment in the sector (World Oil Online, 2017). The U.S China solar trade dispute, and Chinese leadership in clean energy investment has altered the clean energy landscape (Hughes, 2017). Cybersecurity is affecting not only how smart grids are designed, but critical infrastructure as well (Bronk, 2014). The high-tech components now critical for global power systems and technology is putting pressure on conflict minerals (de Ridder, 2013). Projects like the CASA 1000 high-voltage regional transmission line from the Kyrgyz Republic and Tajikistan through Afghanistan and to Pakistan have multiple geopolitical concerns (CASA-1000, 2017). The lack of quality energy services in sub-Saharan Africa and parts of Asia has multiple impacts on issues such as urbanization and migration (USAID, 2017). In short, the web of energy, technology, economics, and national security is thickening.

BUILDING ON THE PAST

The recent renaissance of oil and gas in the U.S has reinforced the alluring notion that energy independence and national energy security are the same thing. But the global nature of energy markets expose this notion as utterly misleading. Two-thirds of global oil and gas production is traded internationally. Russia, one of the largest exporters of gas and oil, imports high quality

uranium, machinery, equipment, and electricity. Petro-giant Saudi Arabia must import refined gasoline and a host of extractive industrial technology, and is now looking at a massive push into solar energy. Even the vast and bountiful United States cannot escape global markets. The U.S. exports coal and liquefied natural gas, yet still imports crude oil and rare earth minerals. And it seems the expected opening up of Federal lands for new coal mining will not make much of a dent in that market or its prices.

Shortages or the disruption of energy services can no longer be treated as independent catastrophes that can alone be solved by military action, but as interwoven threats to the world at large with potentially great destabilizing effects. The Defense Department's most recent Quadrennial Defense Review (QDR) highlights how instability may be increased in the coming years by a competition for resources, including energy and water, which could escalate regional confrontations into broader conflicts (Department of Defense, 2014). As a result, new approaches to planning are needed and these can be supported by diplomacy (Bazilian and Chattopadhyay, 2016).

While U.S. diplomats don't seem ready for this new world, the good news is that they have successfully deployed strategic energy statecraft in the past. The Marshall Plan was one of the most successful early examples (Marshall Foundation, 2017). America invested in infrastructure in Europe—for instance, the Limber Dam in Austria and the Genissiat hydroelectric project in France—to aid recovery and to expand markets for U.S. goods. President Eisenhower's Atoms for Peace program is another case of energy diplomacy, which led to further programs in high energy physics and technology that enabled innovations like medical isotopes, food irradiation, and even space exploration (Eisenhower Presidential Library, 2017). During the Cold War, investment in energy infrastructure—such as the use of the World Bank to build large-scale hydroelectric dams in Vietnam, Ghana, and other former European colonies—helped to counter growing Soviet influence. Today's U.S. Overseas Private Investment Corporation (OPIC) makes numerous investments based on security grounds all over the world, exemplifying economic soft power in action.

UNAVOIDABLE INTERCONNECTIONS

Others are acknowledging these interdependencies and interconnections. As an example, the new Director of the International Energy Agency immediately began to expand the scope of that agency beyond the OECD and extending his hand towards China, Mexico, India, and others. U.S. policymakers need to acknowledge more players in the international scene, and accept that they are in fact competing with China, India, and Russia in their efforts to acquire resources abroad and form international partnerships. Other institutions are entering the picture too (Van de Graaf and Zelli, 2016).

One of the latest strategies for advancing energy statecraft can be seen in the Asian Infrastructure Investment Bank (AIIB) founded in 2014. This multilateral institution led by China has approved financing for energy projects in Myanmar, Pakistan and Bangladesh. These efforts have been seen as a diplomatic and strategic victory for the Chinese government in advancing its influence beyond its borders. Its energy strategy is now being developed, and in a public and transparent manner through a series of consultations.ⁱⁱ

Energy statecraft unavoidably requires global cooperation too. During the 2014 G-7 summit, the Energy Ministers of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States outlined principles that strengthen energy security as a core component of economic and national security (Press Statement by European Commission, 2014; IEP, 2016). These include the development of flexible, transparent and competitive energy markets; diversification of energy fuels, sources and routes, and encouragement of indigenous sources of energy supply; enhancing energy efficiency in demand and supply, and demand response management; and improving energy systems resilience by promoting infrastructure modernization and supply and demand policies that help withstand systemic shocks.

A recent positive example of energy statecraft in action which makes linkages between U.S. national security, global growth, and human development is Power Africa and the supporting Electrify Africa Act (USAID, 2017; Moss, 2016). The initiative was originally borne out of diplomatic discussions with key national security allies—such as Kenya, Ethiopia, and Nigeria which are all essential partners in the fight against terrorism—about what steps the United States could take to bolster governance and capabilities in those states. Although security is not the stated focus of efforts to address energy poverty, the evolving harmony of interests between the private sector and the American and African governments both support conditions in the recipient countries for more stable societies that help counter, rather than export, extremist violence.

Such geopolitical complexities, and a global energy system under transition, demand an ambitious agenda that requires an expansive diplomacy. The shortcomings in the current interpretations of energy statecraft appear in greater relief given the interconnectivity of energy systems, trade in energy fuels, consortiums of investors, governing institutions, and transboundary pollution. A re-envisioned approach, addressing some or all of these themes, would utilize a variety of foreign policy and multilateral tools to protect the global energy marketplace and spur investment in new generation and innovation, while addressing multiple energy-security challenges. The current Administration, and even those after it, would do well to embrace, rather than ignore, such dynamics.

Authors

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ⁱ See e.g., <http://www.americansecurityproject.org/climate-security/> or <https://climateandsecurity.org/>

ⁱⁱ https://www.aiib.org/en/news-events/news/2017/20170124_001.html